

IN THE SPECIFICATION

Please **delete** the Sequence Listing presently of record and substitute, therefor, the attached Substitute Sequence Listing.

Please **amend** the paragraph beginning at page 12, line 7 and ending at page 12, line 14 with the following rewritten paragraph:

C² --Kozaki et al. (in "Antibodies against Botulism Neurotoxin", L.L. Simpson, ed., 1989, Academic Press, New York) suggested that a protective epitope might be present in the 50 kDa carboxyl terminus (HC) region of the protein. Thompson et al. (1990, *Eur. J. Biochem.* **189**:73-81) deduced the amino acid sequence for the serotype A botulinum toxin. DasGupta et al. (1990, *Biochemie*, **72**:661-664) identified the "nick" site for post-translational cleavage of the expressed toxin polypeptide, from which the sequence of the heavy chain can be deduced as SEQ ID NO:41. See also Krieglstein, et al., 1994, *J. Protein Chem.*, **13**:49-57.--

Please **delete** the sequence paragraph beginning at page 12, line 15 and ending at page 12, line 31.

Please **amend** the paragraph beginning at page 13, line 1 and ending at page 13, line 6 with the following rewritten paragraph:

C³ --Whelan et al. (*Appl. Environ. Microbiol.* **58**:2345-2354, 1992) have deduced the amino acid sequence for the serotype B botulinum toxin. Schmidt, et al. (1985, *Arch. Biochem. Biophys.*, **238**:544-548) provided N-terminal sequence information for the heavy chain resulting from post-translational cleavage of the expressed toxin polypeptide, and the sequence of the heavy chain can be deduced from this information as SEQ ID NO:42.--

Please **delete** the sequence paragraph beginning at page 13, line 8 and ending at page 13, line 24.

Please **amend** the paragraph beginning at page 36, line 17 and ending at page 36, line 17 with the following rewritten paragraph:

C⁴ --The sequence of the C fragment of the A chain was deduced as SEQ ID NO:38.--

Please **delete** the sequence paragraph beginning at page 36, line 18 and ending at page 36, line 26.

Please **amend** the paragraph beginning at page 36, line 32 and ending at page 36, line 32 with the following rewritten paragraph:

C⁵ --The sequence for the synthetic gene is SEQ ID NO:37.--

Please **delete** the sequence paragraph beginning at page 37, line 1 and ending at page 37, line 27.

Please **amend** the paragraph beginning at page 38, line 6 and ending at page 38, line 7 with the following rewritten paragraph:

C⁶ --The C fragment for botulism toxin serotype B of Whelan was studied and the portion of the protein having the sequence of SEQ ID NO:40 was defined as the C fragment.--

Please **delete** the sequence paragraph beginning at page 38, line 8 and ending at page 38, line 16.

Please **delete** the paragraph beginning at page 38, line 17 and ending at page 38, line 17.

Please **amend** the paragraph beginning at page 38, line 18 and ending at page 38, line 25 with the following rewritten paragraph:

C⁷ --The synthetic gene for expression in *E. coli* was produced in the manner described for synthesis of the gene for the C fragment of the A strand, namely, using a large number of oligomers of approximately 60-65 bases corresponding to the sequences of the + and - strands with overlaps of 7 bases. The oligomers were allowed to anneal and were ligated to form subunits of 250-300 base pairs each. Each subunit had been designed to have restriction

sites at their termini which allowed them to be assembled in the right order to form the complete
C¹ gene. The synthetic gene encoding the C fragment of the B toxin is SEQ ID NO:39.--

Please **delete** the sequence paragraph beginning at page 38, line 26 and ending at
page 39, line 21.